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ABSTRACT

Irrespective of how learning is done, all learning includes common elements. Learning philosophy may be discussed in terms of settler and pioneer philosophies. Settler philosophy attempts to answer all the questions and to define and tame the educational establishment. Pioneer philosophy, on the other hand, is an attempt to provide education in its widest meaning. In open learning, the teacher is the settler and the open learner is the pioneer. Open learning improves access to learning; the ultimate control of what is learned is still held by those who collect the original information and make it available to the learner. As financial constraints on education tighten and cost becomes an even more important factor, open learning must become an integral part of the life of an institution rather than an "extra." Talk of open learning must be replaced by an emphasis on learning by whatever route and method is most appropriate and accessible for the customer. One scenario for the future may be termed embedded, dispersed, and high-tech. The dispersed college will feature dispersed learning centers and diverse access systems, including simulators, microcomputers, direct and satellite broadcasting, videotex, and an array of other high-tech distance education media and instructional materials. (A discussion of colleges, educators, and students in terms of the pioneer and settler philosophies is appended.) (MN)

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The future of Open Learning

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Date

July 1987

Conferences, Courses and Workshops

Open learning and the provision for adults

The Future of Open Learning

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THE FUTURE OF OPEN LEARNING

Whenever I am asked to give a talk "The future of....." I quail because 90% of all forecasts are wrong and the 10% that are right are right because of accident! For example can I quote:-

> "The theoretical maximum power output of the new Ferrybridge Power Station is 150 MW (paper in the proceedings of the IEE 1923) - the present capacity is 3,300 MW

'The energy produced by the breaking down of the atom is a very poor kind of thing. Anyone who expects a source of power from the transformation of these atoms is talking moonshine' – Ernest Rutherford (1871–1937) after he had split the atom for the first time.

'Flight by machines heavier than air is unpractical and insignificant, if not utterly impossible' – Simon Newcomb (1835–1909). The first flight by the Wright Brothers eighteen months afterwards did not affect his opinion.

'Rail travel at high speed is not possible, because passengers, unable to breathe, would die of asphyxia' – Dr Dionysys Lardner (1793–1859), professor of natural philosophy and astronomy at University College, London. He also asserted that no large steamship would ever be able to cross the Atlantic, since it would require more coal than it could carry. Two years later the *Great Western* crossed the Atlantic.

'We don't like their sound. Groups of guitars are on the way out.' – Decca Recording Company when turning down the Beatles in 1962. (The group was also turned down by Pye, Columbia, and HMV).

'They couldn't hit an elephant at this dist . . .' The last words of General John Sedgwick spoken while looking over the parapet at enemy lines during the Battle of Spotsylvania in 1864.

The title I agreed for this paper was "The Future of Open Learning" but on reflection think it would be more appropriate to talk about "The Future of Teaching". If we take the whole history of mankind then teaching can be considered as a temporary abberation in the history of human learning. For most of the history of mankind man learnt rather than was taught and much of the development of teaching was concerned as much with ensuring that only the "right" people had access to the knowledge than with the knowledge as such.

When we speak of learning we cover at least six separate functions:-

1) LEARNING FACTS
2) LEARNING HOW TO FIND FACTS
3) USING FACTS - DEVELOPING THEORIES
4) PROBLEM SOLVING
5) ACQUIRING AND IMPROVING MANUAL SKILLS
6) ABSORBING BELIEFS, STANDARDS OF BEHAVIOUR AND THE CULTURAL VALUES OF SOCIETY.

these elements remain the same irrespective of <u>how</u> the learning is done. What is different is the attitude to the process of learning - there are basically two attitudes which I designated SETTLERS AND PIONEERS

There are two views of life with two kinds of people. Some see life as a possession to be carefully guarded. They are <u>settlers</u> Others see life as a fantastic, wild, explosive gift. They are <u>pioneers</u>.

To no-one's surprise there are two kinds of philosophy: <u>Settler Philosophy</u> and <u>Pioneer Philosophy</u>. Settler philosophy attempts to answer all the questions, and to define and housebreak the Educational Establishment. Settler philosophy establishes the status quo on Golden Tablets in Cinemascope. Pioneer philosophy is an attempt to provide education in its widest meaning. The pioneer philosopher sees education as a wild adventure, a journey of discovery, complete with Indians, saloon girls and the hauntng call of what is yet to be discovered.

(The complete Settlers and Pioneers is given as an appendix)

Not surprisingly the Teacher is the "Settler" and the Open Learner the "Pioneer"! Fig 1 shews the different approaches to the common problem, and although there are many differences and Open Learning improves <u>access</u> to learning, the ultimate control of what is learnt is still held by those who collect the original information and make it available to the learner - you can only draw from the data base that which has been put in.

Continued.....

If we look at the scene from the viewpoint of the learner then we have (Fig.2) a situation in which there is often a trade off between hardware and costs and the costs of tutorial support.

These values are, however, not static as hardware and software prices continue to fall while tutorial support costs continue to rise and we have already passed one significant cross-over point as an hour long computer aided (CAL) programme can be hired for a day for less than one hours salary of a lecturer - of course what can happen is that we have the CAL package and employ the lecturer to load it and run it, thus doubling our costs rather than reducing them!

Which way the learner goes in the future will depend upon the trade off he is prepared to make to ensure access at times and places of his chosing and to what extent time or place has the higher priority for him. This choice is critical to the institution in planning how to meet future market trends. To meet a customer demand for flexibility in time of access is possible if expensive, but if the demand is for flexibility of place (or worse still flexibility of both time and place) then it becomes an almost impossible demand to meet by conventional means. Unconventional means can perhaps solve the problem - if we assume that the sales of home micros and video recorders continues to grow and that the newer technicially advanced video systems such as Video-8 gain in popularity - then it is possible to envisage a CAL system which uses the fact that Video-8 can have frame numbers on the video tape (and hence individual frames can be accessed) to allow the construction of a low cost interactive video- CAL System. Learning can then take place at home and with complete freedom of time of learning. With a modem built in, data bases can be accessed via videotex and the tutor asked for help via electronic mail. Even with current technology such a set of hardware can be assembled for under £1,000 - if you estimate a life of four years and interest at 10% the annual cost is about £350. For my College the cost of rent, rates,loan charges, heating, lighting, caretaking etc., is about £170/FTE so we are not far off the point at which it would pay us to give the student the interactive video/CAL kit and say "stay at home!".

What of the future so far as the Institution is concerned? Open Learning is arguably one of the critical factors in determining whether the institution will survive. With free trade in both AFE and NAFE an institution will either have to be very lucky geographically or very responsive to the needs of its customers to stay in business - it is, of course, connected to a life support machine called a Local Authority (for the moment!) but if it is suffering from brain death then sooner or later the life support machine will be switched off! Survival will require a whole series of conflicting pressures to be resolved. Customer pressure and changing market demands have been discussed earlier but there are many other external pressures to be met. The Open

Continued.....

College gives access to learning materials not just to colleges but direct to the learner and to other non-college providers thus potentially increasing the competitive pressure. Meanwhile the MSC will continue to press for instant response to the needs of industry (have you ever had industry respond instantly to your needs? - "sorry sir - that is on six month delivery at the moment!"), while the Audit Commission will carry on seeking for 100% resource utilisation - and neither party will acknowledge that it is impossible to have both instant response and 100% use of resources.

To meet these pressures Open Learning must become an integral part of the life of the institution rather than a bolt-on extra so that ultimately we can stop talking about "open learning" and concentrate on "learning" by whatever route and method is most appropriate to the customer, to abandon "what do I wish to teach you" in favour of "what is it that you need to learn" - and having defined what it is they need to learn then discuss the most appropriate method for them of learning it.

Viewed this way the process of breaking courses into discrete modules is a necessary step before open learning can effectively be embedded within the system.

What then are my scenarios for the future for those colleges who survive. I can see three major types which I call "embedded" "dispersed" and "high-tech"

The "embedded" college will from the outside look very much as it does today, and the inside will not have changed very much. What will have changed is what goes on inside. The staff will have moved on from their present role of packagers and purveyors of information and will have seven major functions.

SALESMAN	to sell their services to potential students.
COUNSELLOR	to work with a potential student to devise a learning package which meets the needs of the student.
SOFTWARE EXPERT	to locate the learning software and make it available to the student
SOFTWARE WRITER	Very occasionally to prepare learning software for students whose needs cannot be met by standard packages.
LEARNING METHODS	to be available to assist students in the learning process.
ASSESSMENT/ APPRAISAL EXPERT	to assess/appraise the learning performance of the student so that the student can achieve his learning goals efficiently and can prove to external validating bodies that he has achieved defined levels of competence.

Continued.....

MARKET RESEARCHER	to follow up students into their career so that the selling/counselling elements can benefit from the resulting feedback.

For the student the differences will be more profound.From being a largely passive participant in a process which he neither designed nor controlled he will be expected to be an active participant specifying ends and responsible for his own progression towards them. This raises questions of maturity and motivation which will require massive change in the schools sector if the open learning methods of the "new" FE are not to require a massive bridging operation.

The "dispersed" college takes the pattern of the "embedded" college to their next logical stage. This is to say that if the central purpose of the institution is learning and that this process goes on when the student interacts with his learning software then the PLACE at which this occurs is irrelevant and given the right technology the learning can take place WHERE it is convenient to the student as well as WHEN convenient. The college then shrinks to a central administrative core together with tutorial bases for those students who live so close to the Campus as to make this a sensible site. Such a dispersed college already exists - Coastline College in Orange County, California USA, Bernhard Luskin, the College President described the concepts behind the College as follows:-

"DISPERSED LEARNING CENTERS

At the outset Coastline ruled out all possibility of acquiring and operating a central campus - the community itself would be the campus.

By utilizing existing public and private facilities within the district during hours they are vacant and by leasing three elementary schools that were closed because of declining student enrolment and turning them into adult neighborhood learning centers, an estimated $60m in 1976 dollars (or $100m in 1979) that it would have cost to construct a physical campus was saved.

In fall of 1979, classes are conducted in 127 locations, slightly more than one for every square mile of the college service area, in places like office buildings, banks, park recreation centers, neighborhood schools, community centers, private businesses, convalescent hospitals, senior citizens centers, apartment complexes, and mobile home parks, wherever there is need and appropriate space"

DIVERSE ACCESS SYSTEMS

More than 20% of all Coastline students are enrolled for credit study in broadcast television courses (telecourses). Research has shown that over 60% of students take telecourses to help them reach a degree objective. An increasing number, though, list personal enrichment or professional advancement as the primary objective.

Continued.....

Other nontraditional delivery systems are used at Coastline but reach a smaller number of students than telecourses. These include courses by newspapers and by mail, four videocassette courses, and two business management courses based on independent study packages."

My last scenario the "high tech" is the one I use when I want to produce anxiety neuroses in NATFHE Officers. To do this I describe it as my new College at Wapping where there are no lecturers and the students learn by Computer Aided Learning on Computers maintained by electrians! (the College is, of course, run by Sheen Learning Systems plc a subsidiary of Sheen Training and Education Ltd., registered in the Caymen Islands in my wife's name!). This is not an improbable scenario. Some large retailing chains are already using CAL in preference to their local FE college. Keyboard skills are already taught by CAL methods by private organisations in direct competition with Colleges. My attitude is to welcome such changes, encourage employers to get involved with CAL but to say to them "you will need experts in learning systems and Peterborough Regional College can supply this expertise economically and efficiently to help you set up your own in plant learning centre" In doing this I ensure survival even if the college which survives is doing something entirely different from what it did in the past.

For those of you who are gambling men can I, in closing, tip a fourth horse in the race, running alongside Embedded, Dispersed and High Tech. Grey Mist by Dunkirk out of English Muddle. If Grey Mist wins, the FE Colleges will enter the 21st Century just as they faced the last part of the 20th Century - still doing what they have always done with a small amount of Open Learning as a peripheral activity, wondering why the students don't come in the numbers they used to, but consoling themselves that the retirements of their aging and increasingly useless staff are nicely counterbalancing the fall in student numbers so that by 2020 the last lecturer will have retired and the last FE College will have been turned into a Museum.

P.A.D.SHEEN
1 July 1987

Fig.1

What do we mean by 'Learning'	TEACHING	LEARNING
Learning Facts	Sieving, Packaging, Delivery, Check Retention	Need to know search acquire - use - discard
Learning how to FIND Facts	Usually not well done	Seen as essential
Developing Theories	Often ignored	Problem solving often pragmatic. Sucessfully Solved problems analysed to advance theory
Problem Solving	Usually only for problems with known solutions	
Manual Skills	Often regarded as a "second class" skill	Regarded as a difficult learning problem
Attitudes Beliefs Behaviour Cultural values of Society	Often done by selection of facts taught "Slanted" problem solving tasks Forces external to learning system (TV, Advertising, Press) often have deciding effect.	

Fig.2

Learner-Access to Learning via →

	Cost of Hardware	Cost of Preparing Software	Cost of Replicating Software	Cost of Tutor Support	Flexibility of Access
Simulators	V.HIGH	VERY HIGH	HIGH	LOW	LOW
Computer aided Learning	↑		LOW	LOW	HIGH?
Direct Broadcasting by Satellite			N/A	MODERATE	LOW
Direct Broadcast					LOW
Videotex		MOD.	N/A		MOD.
Video Tape		HIGH	LOW		MOD.
Tape/Slide		MODERATE	↓	HIGH	HIGH
Audio Tape				↓	↓
Distance Learning (print materials)					
Books			LOW	HIGH	
Ask a Friend/ Learn by doing	LOW				HIGH

Settlers and Pioneers

There are two views of life and two kinds of people. Some see life as a possession to be carefully guarded. They are settlers. Others see life as a fantastic, wild, explosive gift. They are Pioneers. A College is an outfit with an abundance of settlers and few pioneers.

There are two philosophies of Education Settler Philosophy and Pioneer Philosophy. Settler philosophy attempts to answer all the questions, and to define and housebreak the Educational Establishment. Settler philosophy establishes the status quo on Golden Tablets in Cinemascope. Pioneer philosophy is an attempt to provide education in its widest meaning. The pioneer philosopher sees education as a wild adventure, a journey of discovery, complete with Indians, saloon girls and the haunting call of what is yet to be discovered.

The wild west offers a stage for picturing these two philosophies. Settlers and pioneers use the same words, but that is where it stops.

THE COLLEGE

In settler philosophy, the college is the COURTHOUSE. It is the centre of town life. The old stone structure dominates the town square. Its windows are small. This makes the thing easy to defend, but quite dark inside. Its doors are of solid oak. No-one lives there except pigeons, and they of course are most unwelcome.

Within the thick courthouse walls records are kept, fees collected, trials held for bad guys. The courthouse runs the town. It is the settler's symbol of law, order, stability, and most important - security. The mayor's office is on the ground floor. His eyes and ears collect the smallest details of town life.

In pioneer philosophy, the college is the COVERED WAGON. It is a house home. The covered wagon is where the pioneers eat, sleep, fight, love and die. It bears the marks of life and movement - it creaks, is scarred with arrows, bandaged with bailing wire. The covered wagon is always where the action is. It moves in on the future, and doesn't bother to glorify its own ruts. The old wagon isn't comfortable, but the pioneers couldn't care less. There is a new world to explore.

THE PRINCIPAL

In settler philosophy, the Principal is the mayor. The Hon. Alpha O Mega. chief executive of settler city, is a sight to behold. He lounges in an overstuffed chair in his courthouse office and keeps the blinds drawn. No-one sees or knows him directly, but since there is order in the town, who can deny that he is there? The mayor is predictable and always on schedule.

The settlers fear the mayor, but look to him to clear the payroll and keep things going. The mayor controls the courthouse which in turn runs the town. Peace and quiet are the mayor's main concerns. That is why he sends the departmental sheriff to check on pioneers who ride into town.

In pioneer philosophy, the Principal is the TRAIL BOSS. He is rough and rugged - full of life. He chews tobacco, drinks straight whisky, and can out-cuss any sailor alive. The trial boss lives, eats, sleeps, fights with his men. Their well-being is his concern. Without him the wagon wouldn't move; the pioneers would become fat and lazy. Living as a free man would be impossible. The trail boss often gets down in the mud to help push the wagon which frequently gets stuck. He lugs the pioneers

when they get soft and want to turn back. His fist is an expression of his concern.

THE DEPUTY PRINCIPAL
In settler philosophy the Deputy Principal is the Sheriff. He is also the guy who is sent by the mayor to enforce the rules. He wears a white hat - drinks milk - and out-draws the bad guys. He saves the settlers by offering security. The sheriff decides who is thrown into jail. There is a saying in town that goes like this: those who believe that the mayor sent the sheriff and follow the rules won't stay in boothill when it comes to their time.

In pioneer philosophy, the Deputy Principal is the Scout. He rides out ahead to find out which way the pioneers should go. He lives all the dangers of the trail. The scout suffers every hardship, is attacked by the indians, feared by the settlers. Through his actions and words he shows the true spirit, intent and concern of the trail boss. By looking at the scout, those on the trail learn what it really means to be a pioneer.

THE STUDENT
In settler philosophy, the student is the Settler, he fears the unknown open frontier. His concern is to stay in good faith with the mayor and keep out of the sheriff's way. He tends a small garden. "Safety First" is his motto. To him the courthouse is a symbol of security, peace, order and happiness, He keeps his money in the Bank. The banker is his best friend. He spends his time playing cards in the peaceful shade of the "Palm Court" area of the courthouse. He never misses an ice cream party.

In pioneer philosophy, the student is the Pioneer. He is a man of risk and daring - hungry for adventure, new life, the challenge of being on the trail. He is tough, rides hard, knows how to use a gun when necessary. The pioneer feels sorry for the town folks and tries to tell them about the joy and fulfillment of a life following the trail. He dies with his boots on.

THE LECTURER
In settler philosophy, the lecturer is the Banker. Within his vaults are locked the values of the town. He is suspicious of strangers. And why not? Look what he has to protect! The banker is a highly respected man in town. He has gun, but keeps it hidden behind his desk. He feels that he and his sheriff a lot in common. After all, they both protect the bank.

In pioneer philosophy, the lecturer is the Cook. He doesn't furnish the meat - he just dishes up what the system demands. This is how he supports the movement of the wagon. He never (?) confuses his job with that of the trail boss, scout or buffalo hunter. He sees himself as just another pioneer who has learned to cook. The cooks job is to help the pioneers to pioneer.

EDUCATION
In settler philosophy, education is trusting in the Safety of the Town. Obeying the laws - keeping your nose clean - believing the mayor is in the courthouse.

In pioneer philosophy, education is the Spirit of Adventure. The readiness to move out. To risk everything on the trail. Faith is the obedience to the restless voice of the trail boss,

Liberally adapted from: Western Theology by Wes Seeliger